

A New Variety of *Koeberlinia*

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Field studies of *Koeberlinia spinosa* Zuccarini have revealed variations unmentioned in literature. The author's attention has repeatedly been drawn to a decidedly slender form that differs from the species by its more diffuse habit and greater ramification of branchlets. Numerous intergradations have been encountered, and because of ecologic as well as taxonomic considerations these variations seem justly to be considered as stable.

Dr. Asa Gray was evidently acquainted with a few of these forms. Although he does not specifically mention these variations in his Synoptical Flora when he describes Zuccarini's species, the description is, nevertheless, broad enough to be inclusive of some variability. To a certain extent this is also true of Small's description in the Flora of the Southeastern United States.

The botanist in the field, working in the region in which this species occurs, may be surprised that such active collectors as Wright, Nealley, Palmer, and Rose failed to account for these odd forms. However, the wide geographical range of the species, the seasonal differences in time of flowering, the lack of comparative herbarium material, and the physical difficulties involved in such field work serve to satisfactorily explain this apparent discrepancy.

The plant upon which Zuccarini evidently based his species is widely distributed through western and southern Texas, New Mexico, and Mexico. It flowers uniformly from June to August, the period being locally dependent upon summer rainfall.

The variety here proposed as new, seems to flower only in March and April and then very sparingly. It has been the writer's good fortune to be able to actually cover much of the natural range of the species. However, until the fall of 1930, he was unaware of the existence of flowering material, for usually the field work was undertaken after the end of May. In the course of working over a collection made by Mr. Fred Warren along the Rio Grande River while he was with the U. S. Biological Survey, a mature flowering specimen was discovered.

This new variety cannot be considered as a mere ecad. Its independence of environmental factors is too pronounced; also it may be found on open hills as well as in dense chaparral, freely mingling with the species. Likewise, it is not a distinct species, for with a little diligent search every intergradation between the

two extremes may be found. The frequency of occurrence seems to justify an individual name.



FIGURE 1. The specimen on the left represents the average form, while that on the right is apparently the extreme limit of variability.

Koeberlinia spinosa Zuccarini var. **verniflora** Bogusch, var. nov. A thorny leafless shrub up to 2 meters high; branches bright green, *attenuated*, 3-5 cm. long, sometimes only 1.5 cm. long in extreme cases, *tapering gradually* to the apical thorn; vesture of unicellular puberulence, more common near inflorescence; flowers in *open fascicles*, rarely umbellate; fruit as in the species. *Flowers in March and April.*

Frutices, aphylli, subglandulosi, ramosissimi, graciles; rami teretes, ramuli spinosi, viriduli, 1.5-5 cm. longi. Flores albi, parvi, fasciculati sub ramulorum apicibus. Pedunculi fructiferi subglandulosi.

Co-type: Fred Warren 1049, "Dry gravelly soil, Rio Grande City, Texas."

Type: Bogusch & Molby 4365, "Pasture near Weslaco, Texas."

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